



<Overview>

**I. Theme**  
**"The Future of the Component Industry Depending on the Underlying Technology"**

*=Does the withdrawal of major component makers accelerate the transformation of the industry?=-*

**I. Abstract**

The office equipment industry is shaking; Fuji Xerox and Xerox Corp. ("Xerox" hereinafter) have decided to terminate their long-time technology contract and split away as of April 2021. Meanwhile, Xerox's hostile takeover for HP was eventually abandoned due to COVID-19, but the office equipment market is quickly maturing, and the industry's restructuring will be moving even faster as makers try to survive.

From a perspective of roller makers, the takeover standoff between the hardware makers is an event that blocks them from supplying products or laying out future strategy. If their users had to be replaced all at once, it could critically define winners and losers among component makers. Apart from the turmoil, already struggling component makers with their low-margin business had been pressured to reduce unit prices even though their supply is already low. They're forced to make up their mind whether they want to continue or shut down the business. There's a major component maker having already told its major customer maker that it's shutting down the business, while others are facing the possible business integration or restructuring after years of slumping sales. Even if there's a failing company giving up its share to others, those who took over will eventually suffer a loss in demand because the increase they succeeded is only temporary. In such a process, there'll be no capital investment expected, only to require makers to turn to what they can offer at the moment.

Emerging Chinese component makers are making Japanese component makers less cost competitive. If the situation stays as it is, there'll be even fewer makers left in the market. These Chinese printer makers are mushrooming due to "the policy of the Chinese product first" issued in the country, which will put Japanese-made components in smaller demand.

Still, this does not mean that the entire office equipment component market will only be dominated by Chinese component makers because the industry was developed over many years of cooperation between hardware makers and component makers. Currently, component suppliers are at a crossroads as they're to decide whether to shut down the business or not, but Japanese component makers still have advantage over "underlying and manufacturing technology, as well as product quality." At the end of the day, companies that successfully prove their worth with the unparalleled technology will stay last and be needed.

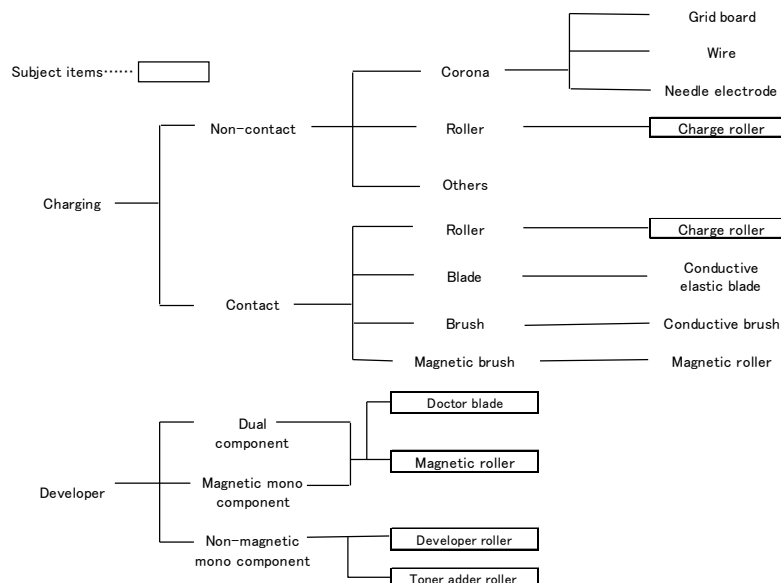
Against this backdrop, the report will research and analyze the current status, future strategy and developments of specialist makers and in-house makers of the magnetic roller, charge roller, heat roller, pressure roller, transfer roller, intermediate transfer belt, fuser belt, paper feeder roller, and transfer roller.

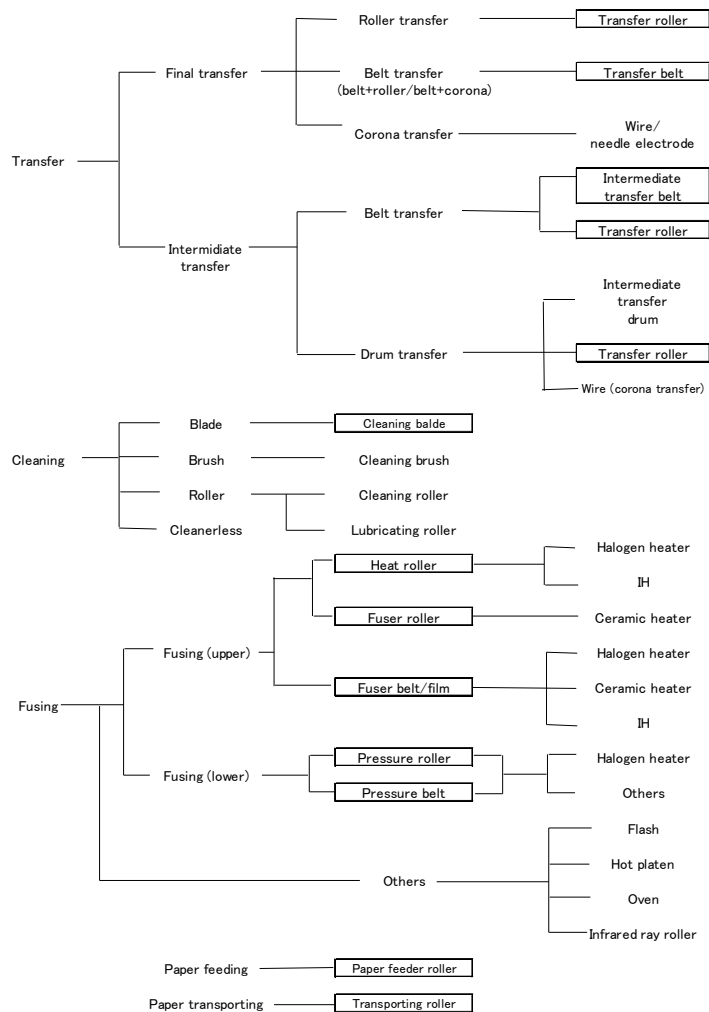
The 2020 edition marks the 15th publication of the report, based on our full range of expertise that no other company could offer. We hope this report will be very useful to all our readers and industry stakeholders.

**Detailed analysis of Japanese roller specialized makers, as well as Chinese and South Korean roller and in-house makers**

**III. Items and Makers**

**1. Items**





## 2. Target makers

### 2-1. Roller specialist makers

Japanese makers (32) / South Korean makers (10) / Chinese makers (53) / Hong Kong makers (1) / Taiwanese makers (2) / others (6) / In-house makers (6) (110 makers in total)

### 2-2. Hardware makers (major 15 makers)

Copier makers / Printer makers / Fax makers

## IV. Research Period and Methodology

### 1. Research period

From 2017 to 2023

### 2. Research methodology

- 1) On-site and in-person interviews with targeted makers
- 2) Analysis and review of open literatures, materials, statistics, and other sources
- 3) Analysis of Data Supply's own proprietary database

## V. Format and Report Preparation Period

1. Research form: Multi-client form

2. Research period: March 2020 to May 2020

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4. Report format: A4 size (PDF format)

5. Price: \$4,000-

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Canon / Ricoh / Fuji Xerox / Konica Minolta / Sharp / Toshiba TEC / Kyocera Document	
Solutions / Brother Industries / OKI Data / Muratec / HP Printing Korea / Lexmark / Xerox	
Corporation / Pantum / Lenovo / Deli	
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B. Component Market .....

Structural description and materials, manufacturing process, number of components / Market trend by maker, technology trend, price, supply destination, manufacturing base

- [1] Charge roller [2] Developer roller [3] Toner adder roller [4] Transfer roller  
 [5] Intermediate transfer belt [6] Fuser roller / belt [6]-1. Total of fuser parts  
 [6]-2. Total of pressure parts [6]-3. Heat roller [6]-4. Fuser belt [6]-5. Pressure roller  
 [6]-6. Pressure belt [7] Cleaning blade [8] Paper feeder roller [9] Transporting roller

C. Individual Makers

C-1. Japanese specialist makers .....

<Common research subjects> Sales of roller-related components (for copiers and LBP/ATM/inkjet printers) / Shipment volume and value (2017-2023 forecast) / Shipment volume and value by application and size (2017-2023 forecast) / Shipment volume and value by material (2017-2023 forecast) / Technology and material trend / Price trend and product life / Material supplier / Supply destination / Manufacturing base (Japan and overseas)

- [1] I.S.T [2] Arai Seisakusho [3] INOAC [4] NOK/Synztec [5] Kaneka  
 [6] Kinjo Rubber [7] Kinyosha [8] Gunze [9] Showa Cable Systems  
 [10] Shin-Etsu Polymer [11] Sumitomo Rubber Industries [12] Sumitomo Electric Industries  
 [13] Sumitomo Riko [14] TDK [15] Toho Rubber [16] Nissei Electric  
 [17] Nitta Chemical Industrial Products [18] Nitto Denko [19] NEOMAX Engineering  
 [20] Bando Chemical Industries [21] Hitachi Metals [22] Fukoku  
 [23] Bridgestone [24] Meiji Rubber & Chemical [25] Yamauchi

C-2. In-house makers .....

- [1] Canon [2] Ricoh [3] Fuji Xerox [4] Konica Minolta [5] Toshiba TEC  
 [6] Kyocera Document Solutions

C-3. Overseas specialist makers .....

- [1] Ah-Sung Chemical (South Korea) [2] Foshan Ascend Precision Accessories (China)  
 [3] Galaxia Device (South Korea) [4] Jahwa Electronics (South Korea)  
 [5] Sang-A Frontec (South Korea) [6] Shenzhen Fancy Creation Industrial (China)  
 [7] Shenzhen LEPUTAI Technology (China) [8] Taejin Precision (South Korea)

C-4. Other makers .....

- [1] Japanese makers [2] Overseas makers

Comprehensive Analysis

5. Market trend by material (2019/2023)

Total figures are based on individual makers' data compiled by Data Supply Inc. Unit: Thousand

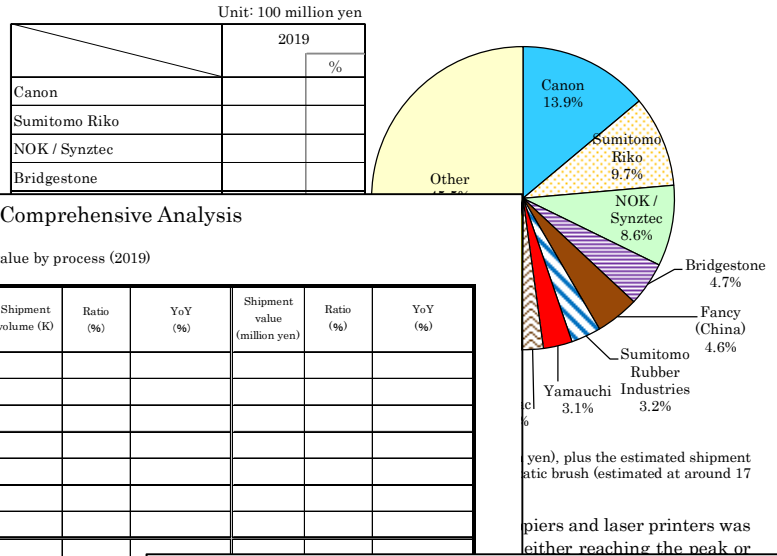
	EPDM		Urethane (Polyurethane)		Silicone			NBR based	Epichlorohydrin rubber based	PPA/PTFE	Others	Total
	Rubber	Foam	Rubber	Foam	Rubber	Rubber+fluoroate	Foam					
Charge Roller	2019	26,000	0	14,300	0	0	0	0	24,000	0	0	64,300
	%	40.4	0.0	22.2	0.0	0.0	0.0	0.0	37.3	0.0	0.0	100.0
	2023 (Forecast)	20,800	0	11,700	0	0	0	0	24,100	0	0	56,600
Developer Roller	2019	0	0	14,180	0	29,100	0	0	0	0	0	43,280
	%	0.0	0.0	30.0	0.0	61.5	0.0	0.0	0.0	0.0	0.0	100.0
	2023 (Forecast)	0	0	13,050	0	24,730	0	0	0	0	0	37,780
Toner Adder Roller	2019	0	0	0	44,740	0	0	0	0	0	0	44,740
	%	0.0	0.0	0.0	95.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	2023 (Forecast)	0	0	0	39,530	0	0	0	0	0	0	39,530
Transfer Roller	2019	2,810	0	3,170	0	0	0	0	0	0	0	5,980
	%	6.6	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	2023 (Forecast)	1,960	0	2,834	0	0	0	0	0	0	0	4,794
Heat Roller	2019	0	0	0	0	0	0	0	0	0	2,270	2,270
	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	2023 (Forecast)	0	0	0	0	0	0	0	0	0	0	0
Pressure Roller	2019	0	0	0	0	0	0	0	0	0	0	0
	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2023 (Forecast)	0	0	0	0	0	0	0	0	0	0	0
Cleaning Blade	2019	0	0	0	0	0	0	0	0	0	0	0
	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2023 (Forecast)	0	0	0	0	0	0	0	0	0	0	0
Paper Feeder Roller	2019	106,683	0	0	0	0	0	0	0	0	0	106,683
	%	78.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	2023 (Forecast)	96,130	0	0	0	0	0	0	0	0	0	96,130
Transporting Roller	2019	160,163	0	0	0	0	0	0	0	0	0	160,163
	%	95.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
	2023 (Forecast)	138,775	0	0	0	0	0	0	0	0	0	138,775

\*Tables are provided with figures and comments in the complete version.

Comprehensive Analysis

3. Market share of shipment value by roller maker (2019)

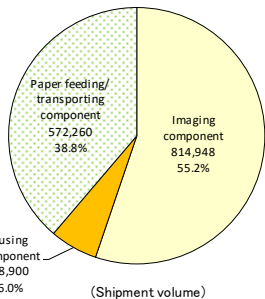
1) For copier/LBP



Comprehensive Analysis

2. Shipment volume and shipment value by process (2019)

	Component	Shipment volume (K)	Ratio (%)	YoY (%)	Shipment value (million yen)	Ratio (%)	YoY (%)
Imaging component	Charge Roller						
	Magnetic Roller						
	Developer Roller						
	Toner Adder Roller						
	Transfer Roller						
	Intermediate Transfer Belt						
	Cleaning Blade						
	Sub total						
Fusing component	Heat Roller						
	Fuser Belt						
	Pressure Roller						
	Pressure Belt						
	Sub total						
Paper feeding/transporting component	Paper Feeder Roller						
	Transporting Roller						
	Sub total						
	Total						

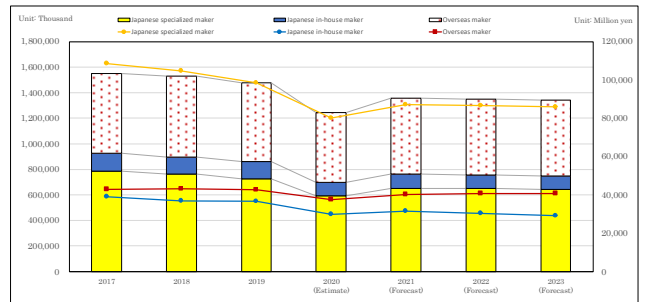


In terms of the ratio of the functional components by image formation accounted for 55.2% of the total shipment volume, both of which accounted for the majority. Fuser belt accounted for only 6% of the shipment volume, and transporting volume of paper feeding and transporting component shipment value was 11.8%. In general, Japanese makers are strong at making value-added components while overseas makers are better at cost-competitive components with low technical barriers. In recent years, however, some imaging and fusing components authorized as genuine

Comprehensive Analysis

A. Comprehensive Analysis  
A-1. Overall market trend by functional component (13 key items)  
1. Shipment trend by Japanese and overseas maker (2017-2023)

Shipment Volume (Thousand)	Specialized maker	In-house maker	Total of Japanese makers	Total of overseas makers	Total	2017	2018	2019	2020 (Estimate)	2021 (Forecast)	2022 (Forecast)	2023 (Forecast)
						%	%	%	%	%	%	%



Shenzhen Fancy Creation Industrial

[6] Shenzhen Fancy Creation Industrial (China)  
1. Overall  
1) Changes in shipment volume and value (2017-2023)

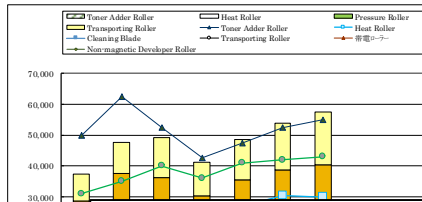
		Year	2017	2018	2019	2020	2021	2022	2023
						(Estimate)	(Forecast)	(Forecast)	(Forecast)
Shipment volume (Unit: Thousand)	Toner Adder Roller								
	Heat Roller								
	Pressure Roller								
	Cleaning Blade								
	Transporting Roller								
	%								
Shipment value (Unit: Million yen)	Toner Adder Roller								
	Heat Roller								
	Pressure Roller								
	Cleaning Blade								
	Transporting Roller								
	%								

\*Tables are provided with figures and comments in the complete version.

Pressure Roller

7. Supply destinations

		Component maker	Avat Seisakusho	NOK/Synzee	Canon	Kiyosha	Shoowa Cable Systems	Shin-Esu Polymer	Sunimoto Electric	Toho Rubber	Nissai Electric	Fukoku	Ricoh *	Fancy	TAMJIN
Supply destination	Canon														
	Ricoh														
	Fuji Xerox														



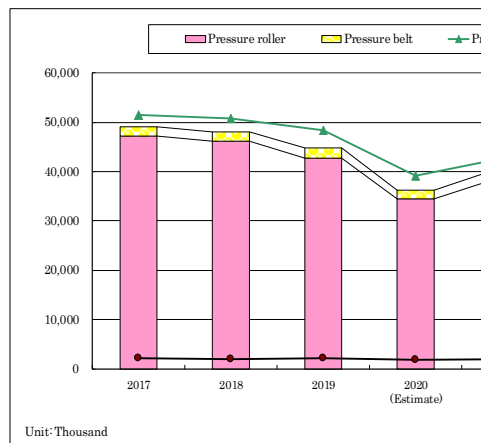
Total of Pressure Parts

[6]-2. Total of pressure parts  
Changes in shipment volume/value (2017-2023)

		Year	2017	2018	2019	2020	2021	2022	2023
						(Estimate)	(Forecast)	(Forecast)	(Forecast)
Shipment volume (thousand)	Pressure roller								
	Pressure belt								
	%								
Shipment value (million yen)	Pressure roller								
	Pressure belt								
	%								

FANCY is a Chair as TV. It then entered the business by began producing and specializes in its functional roller mass producing facility of heat rollers. Other than In addition to the pinch rollers, cleaning blades Production bases among its customers. Sales of the entire sharply. Nevertheless competitiveness recovering after 2

[Sales of roller related For copiers and For ATM For inkjet printers



Total shipment volume of pressure parts in 2019 was 93.0% year on year, or 44.76 million or 15.165 billion yen. A sharp decrease is inevitable in 2020 like fuser parts, and demand As for the ratio of pressure rollers and pressure belts, both shipment volume and value of Pressure rollers are standard for almost all machines of almost all makers. The trend will

Comprehensive Analysis

[3] Developing

1) Overview

The developing process is divided into mono component systems that only require toner, and the dual component system that requires toner and carrier. There are two types of mono component system: one is the magnetic mono component system and the other is the non-magnetic mono component system. A dual component system is mainly used for copiers, while a mono component system is popular with printers. Non-magnetic mono component system is the mainstream, whereas the magnetic monochrome component system is decreasing.

2) Method by maker (as of May 2020)

maker	Canon	Ricoh	Fuji Xerox	Konica Minolta	Sharp	Toshiba TEC	Kyocera Document Solutions	Brother Industries	Oki Data	Murata	HP (HPPK)	Lexmark
Dual component	○	○	○	○	○	○	○			○	○	○
Magnetic mono component	○						○					
Non-magnetic mono component	○	○							○	○	○	○

[4] Transfer

[4]-1. Monochrome

1) Overview

Processes to transfer toner onto paper from a photoconductor are broadly divided into: a corona transfer system and a roller transfer system. A roller transfer is the mainstream; however, a corona transfer and a belt transfer system are also employed for A3 high-speed copiers, and even an intermediate transfer belt is used for some makers' A3 high-speed copiers for a monochrome application.

2) Method by maker (as of May 2020)

maker	Canon	Ricoh	Fuji Xerox	Konica Minolta	Sharp	Toshiba TEC	Kyocera Document Solutions	Brother Industries	Oki Data	Murata	HP (HPPK)	Lexmark
Roller	○	○	○	○	○	○	○	○	○	○	○	○
Belt	*			○	○	*	*					
Corona	○	○	○									

\*Intermediate transfer belts are used for high-speed devices.